

REMARKS

This Amendment is submitted in response to the Official Letter November 28, 2003. Claims 1 through 4, 11, and 16 through 21 have been amended. The application now includes claims 1 through 23, with claims 1, 4, 16, 18 and 20 being independent claims. Favorable reconsideration of the application, as amended, is respectfully requested.

In the Official Letter, the Examiner rejected claims 2, 20 and 21 under 35 U.S.C. §112, second paragraph for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. Applicants have amended claims 2, 20 and 21 to address the specific concerns of the Examiner. Accordingly, applicants respectfully request that the Examiner withdraw his rejection of the claims under 35 U.S.C. §112, second paragraph.

In the Official Letter, the Examiner also rejected claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,460,210 or Koeninger. The Examiner stated that the Koeninger reference discloses all of the limitations recited in claims 1 and 2 to include causing a switch to change from a first state to a second state when there is a signal present at each of a plurality of input terminals.

Applicants have amended independent claim 1 to recite a device electrically connected to a plurality of input devices and electrically isolated from a switch. Claim 1 also has been amended to recite that the device is in communication with the switch and operative to cause the switch to change from a first state to a second state when there is a signal present at each of the input devices.

The Koeninger reference states, in column 5, lines 36 through 46 that:

The sensors provide signal inputs to circuitry within the monitor. The function of this circuitry is to generate an output signal, referenced as a permit signal, when all of the compartments are empty, i.e., the level of any retained fuel is beneath the bottom sensors 22. This circuitry also deenergizes the permit signal when the level of fuel, in any compartment reaches the top.

The permit signal *is transmitted by cable 28* to rack mounted components of the control system. The rack mounted components are

responsive to and require the permit signal in order to deliver fuel.
(Emphasis Added)

Applicants believe that the Koeninger reference teaches that the sensors mounted within the trailer compartments are electrically connected directly to the fuel delivery rack components. Nothing in the Koeninger reference shows or suggests electrical isolation between an input device and a switch, as is recited in amended independent claim 1. Indeed, because the Koeninger reference discloses an electrical connection, applicants believe that the reference actually teaches away from the structure recited in amended independent claim 1. Accordingly, applicants believe that amended independent claim 1 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

Claim 2 is dependent upon amended independent claim 1. Accordingly, for the reasons given above, applicants also believe that claim 2 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

In the Official Letter, the Examiner further rejected claim 16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,711,827 to Houseman. The Examiner stated that the Houseman reference teaches a connection device that has a plurality of terminals, 26 through 32, in Fig. 1 of the reference, adapted to be connected to at least two signal sources, 18 through 24, and a device 34 connected to the input terminals that is operative to generate an output signal that is a function of a signal appearing at any one of the input terminals.

Applicants have amended independent claim 16 to recite a device connected to a plurality of input terminals that is operative to generate an output signal that is directly proportional to a signal appearing at any one of the input terminals. Claim 16 is directed toward the circuit illustrated in Fig. 4 of the application. The operation of Fig. 4 is described on Page 10, lines 25 through 30, of the application as:

A lead now runs from one of the input terminals 16 through a zero ohm resistor 94, or jumper, to a corresponding output terminal 96. An output terminal 96 is provided for each of the four input circuits shown in Fig.

4. Thus, a signal appearing at an input terminal 16 is transferred to a corresponding output terminal 96. Because an output signal is available whenever any input signal is present, the circuit in Fig. 4 functions as a pass through circuit.

Thus, the output signal is directly proportional to one of the input signals and would become either positive or negative as the input signal becomes either positive or negative. The Houseman reference teaches that the input signals are applied to the input terminals of an OR gate 34. The operation of the circuit shown in Fig. 1 of the Houseman reference is described in column 3, lines 4 through 8, as:

If while the vehicle ignition switch 12 is in the RUN position, one of the switches 18, 20, 22 or 24 is changed from its normal position as shown in Fig. 1, then OR gate 34 would *give a positive voltage output*.
(Emphasis Added)

From the above, it is apparent that the Houseman reference teaches that only positive output signals are generated by the connection device 34. Additionally, it is general knowledge that logic gates, such as the OR gate 34 shown in Fig. 1 of the Houseman reference are bi-level devices, producing either a constant voltage or a ground connection, not either a positive or negative voltage. Because amended independent claim 16 recites a structure that includes a device connected to a plurality of input terminals and that is operative to generate an output signal that is directly proportional to a signal appearing at any one of the input terminals, applicants do not believe that the claim is anticipated by the Houseman reference. Indeed, because the Houseman reference discloses a device that cannot generate either a positive or a negative output voltage in response to an input signal, applicants believe that the reference actually teaches away from the device recited in amended claim 16. Accordingly, applicants respectfully request that the Examiner withdraw his rejection of claim 16.

In the Official Letter, the Examiner further rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over the Koeninger reference in view of U.S. Patent No.

5,495,228 to Futsuhara et al. However, claim 3 is dependent upon amended independent claim 1 and thereby includes the structure recited therein. However, as explained above, applicants believe that the Koeninger reference discloses a structure that is different from that recited in claim 1. Because the same structure is present in claim 3, the combination of the Futsuhara et al. and Koeninger references will result in a structure that differs from that recited in claim 3. Accordingly, applicants believe that claim 3 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

The Examiner also rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over the Houseman reference in view of the Futsuhara et al. reference. However, claim 17 is dependent upon amended independent claim 16 and includes the limitations recited therein. Therefore, for the reasons given above, applicants believe that claim 17 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

The examiner further rejected claims 18 and 19 under 35 U.S.C. §103(a) as being unpatentable over the Koeninger reference in combination with the teachings of the Futsuhara et al. reference. The Examiner stated that the Koeninger reference teaches of a connection device as described in claim 1. Additionally, the Examiner stated that the Futsuhara et al. reference teaches the use of rectifiers to provide a positive signal to a logic circuit from a signal source that may be either positive or negative. The Examiner then concluded that it would have been obvious to incorporate the signal rectification of the Futsuhara et al. reference in the invention of the Koeninger reference.

Similar to claim 1, applicants have amended independent claim 18 to recite an interface device electrically connected to a plurality of input devices and electrically isolated from a plurality of output devices. Amended claim 18 also recites that the interface device is in communication with the output devices and operative to cause the output devices to change from a first state to a second state when there is a signal present at each of the input devices

As explained above, applicants believe that the Koeninger reference teaches that the sensors mounted within the trailer compartments are electrically connected directly to the fuel delivery rack components. Nothing in the Koeninger reference shows or suggests electrical isolation between an input device and a switch, as recited in amended independent claim 18. Indeed, because the Koeninger reference discloses a direct electrical connection, applicants believe that the reference actually teaches away from the structure recited in amended independent claim 18. Even if the Koeninger reference is combined with the Futsuhara et al. reference, the resulting structure will still lack the electrical isolation recited in amended independent claim 18. Accordingly, applicants believe that amended independent claim 18 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

Claim 19 is dependent upon amended independent claim 18. Accordingly, for the reasons given above, applicants also believe that claim 19 is patentable over the art of record and respectfully request that the Examiner withdraw his rejection of the claim.

In the Official Letter, the Examiner objected to claims 4 through 14 as being dependent upon a rejected base claim. However, the Examiner also stated that claims 4 through 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have rewritten claim 4 in independent form to include all of the limitations of base claim 1 and intervening claims 2 and 3. Claims 5 through 14 are dependent upon rewritten claim 4. Accordingly, applicants respectfully request that the Examiner allow claims 4 through 14.

In the Official Letter, the Examiner also objected to claims 20 through 23 as being dependent upon a rejected base claim. However, the Examiner also stated that claims 20 through 23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and the rejections of claims 20 and 21 based upon 35 U.S.C. §112, second paragraph are overcome.

Applicants have rewritten claim 20 in independent form to include all of the limitations of base claim 18. Claims 21 through 23 are dependent upon rewritten claim 20. Additionally, as explained above, applicants have amended claims 20 and 21 to address the rejection based upon 35 U.S.C. §112, second paragraph. Accordingly, applicants respectfully request that the Examiner allow claims 20 through 23.

In view of the amendments and above remarks, it is believed that the application is in condition for allowance.